

# **SUPER SENSES**



## **A LESSON ON ANIMAL BEHAVIOUR**



FOR CLASS : V

SUBJECT:

**ENVIRONMENTAL  
STUDIES**

# MY PROFILE

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# OBJECTIVES OF THE LESSON



- To show that animals have a strong sense of smell, hearing, sight and as many senses as human beings have
- Animals are superior to human beings in some of their senses
- To educate the students the role of wild animals in our eco-system
- To teach the students to be kind to animals
- To show them the steps taken by the Government to protect the wild life

# LESSON IN A NUTSHELL

- Some animals have the super power of smell  
ex: ant, mosquito, bee, silk moth, dog
- Smelling bad or good is just a feeling in humans
- Vision of animals is very powerful especially in birds of prey
- Some animals show high quality of hearing
- Some animals can predict dangers and safeguard themselves
- They have their own language and send messages to others of their kind
- There are animals who hibernate to avoid extreme seasons
- Tiger is the epitome of all super senses in animals
- It is our duty to protect the wild life in our country

# SOFT AND HARDWARES USED

- Windows 2003
- Windows Media player
- Internet explorer
- LCD projector to view on screen
- Scanner
- Camera

# ANIMALS WITH THE POWER OF SMELL



HONEYBEE



BUTTERFLY



MOSQUITO



ANTS



DOG

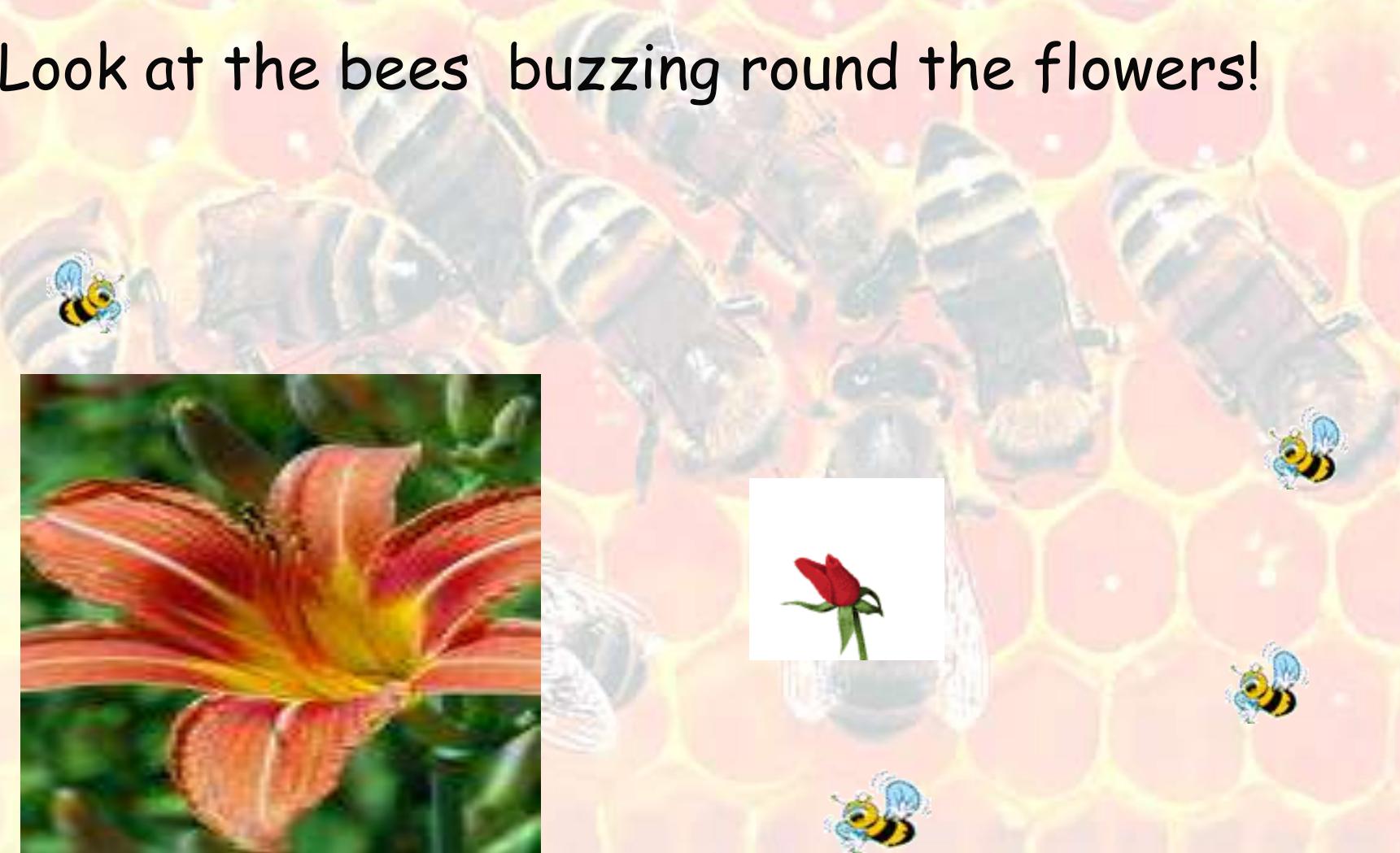
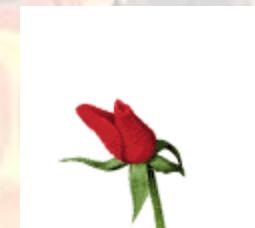


SILK MOTH

# SUPER SENSE OF SMELL



Look at the bees buzzing round the flowers!



# HOW DO THE BEES LOCATE THE FLOWERS?



They have the super sense of smell with which they can easily locate the flowers in the day time. Even if the source of nectar is far away, the worker bees use their smelling power and through 'waggle dance' inform the other bees the location of flowers.

# BEE AND MAN



- The powerful sense of smell in bees is very useful to man.
- The bees visit the flowers and help in pollination of flowers.
- Due to this flowers change into fruit and so man is benefitted by them.



# ANTS - MASTERS IN SMELLING



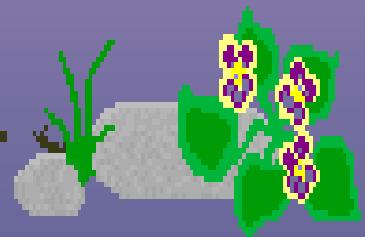
Drop a piece of sweet on the ground and observe after a few minutes



A few ants immediately collect around the sweet and carry it jointly to the hole in anthill



Ants represent collective effort and community living



# HOW DO THE ANTS REACH ?



- The ants have two feelers which help them smell and communicate.
- Scientists have proved through experiments that ants release pheromones (chemical signals) to communicate with each other and the feelers pick these signals.





# SNIFFER DOGS



- Most dogs are able to detect scents far better than humans. They can also hear low-pitched sounds and see better than human beings in dim light.
- Each and every dog has its own area and it can easily find out the entry of other dogs in its area.





# MAN AND THE DOG



Man uses the sniffing capacity of dogs for detecting lethal weapons, criminals and for defusing bombs.

Dogs help Police and Forensic department to extract information on theft and murder.

**[Click on this to watch a Video clip on a Sniffer dog's training](#)**



# MOSQUITO'S NOSING



- Mosquitoes locate the source of their food by scent, sight and our body heat.
- Mosquitoes can smell our body from 100 feet away (30 meters), especially the carbon dioxide ( $\text{CO}_2$ ) that we exhale.



# SILK MOTH USING ITS SMELLING POWER



I locate my life partner by her smell. The female silk moth puts out a smell which attracts us. We go near the fragrant silk moth as far as 5 miles to reach the female moth by our smelling power. We have very powerful antennae in front of our eyes to locate them.

# IT IS TIME FOR SOME ACTIVITY

## ACTIVITY-1



Tie your eyes with your handkerchief.

- Can you smell these things and find out what they are?



Cardamom



Mint



Jasmine



Incense sticks

**Did you get all correct?**

# List down three objects whose smell are liked and disliked by you?

Liked	Disliked
<ol style="list-style-type: none"><li>1. rose</li><li>2. sandal</li><li>3. spices</li></ol>	<ol style="list-style-type: none"><li>1. petrol</li><li>2. cow dung</li><li>3. naphthalene balls</li></ol>

Compare your list with that of your friend's. You'll find that some of the items liked by you are disliked by your friend. It shows the act of smelling good and bad are just your feeling and nothing related to the power of nose.

# ANIMALS WITH THE POWER OF SIGHT

EAGLE



VULTURE



KITE



OWL



PIGEON



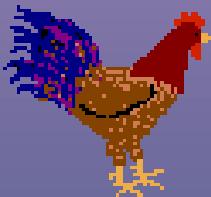
HEN



# OBSERVE...

Look at the position, size and movement of the eyes of the given birds

- Their eyes are fixed and located on either side of the head
- They are big in comparison with the size of their head
- They tilt their head quite often



## ACTIVITY-2



Close your right eye; try to see the objects straight; try to catch a ball thrown at you.

- You cannot see the objects kept on right
- It is not easy to catch the ball with an eye closed.
- Birds too have the same vision and they shake their head to see the things around.

# BIRDS AND THEIR VISION



- Most of the birds have their eyes fixed on either side and so they can see different objects at a time.
- They move their heads so as to focus each eye on different objects
- When they look straight, they do have the vision like human beings focusing on only one object



# OWL AND ITS EYES

- Owl, unlike the other birds, has eyes in front of the face
- It focuses with its eyes on a single object at a time as we do
- When the birds focus their eyes on an object they assess the distance of the object and they increase their span of vision when they look at it with both the eyes.

# BIRDS OF PREY AND THEIR VISION



- Birds like eagle have a very sharp sense of vision and can see the things at a distance of 10 metres while human eyes have a sight range of 2 metres. They dive to catch their prey easily with such a power of vision.

# HEARING POWER IN ANIMALS

ELEPHANT



DEER



MONKEY



RABBIT



DOG



SNAKE



# LIST ANY 5 ANIMALS WITH BIG EARS

- Elephant
- Deer
- Rabbit
- Giraffe
- Cow

Discussion: Is there any use of big ears for animals ?

# **USE OF BIG EARS**

## **ACTIVITY-3**

Just hold your hands at the back of  
your ears and try to hear some sound  
Don't you hear the sound still sharper  
than before?

**YES.**

So, we agree that animals with big ears  
have more hearing capacity.

# SINGERS AND EARS

- Why do the singers often keep their hands behind their ears?
  - By doing so, they increase the hearing area and they can hear their own voice.
- 
- Yes, my uncle who has a little difficulty in hearing keeps his hands at the back of his ears.



# ANIMALS WITHOUT EARS

## ACTIVITY-4

Keep your ear on the desk and tap the desk.

- Don't you hear the vibrations louder?
- The snakes also feel the vibrations on the ground even though they have no external ears.
- They dance to the movement of the been in snake charmer's hand without hearing the sound.
- The birds have no external ears, their ears are covered with feathers.

# SOUNDS AND MESSAGES

Animals make sounds for many reasons

- Crows caw to call their flock for food
- Langur makes warning calls from the trees to save others from danger
- Dolphins call their partners by special sounds
- Some animals cry out when they want to be saved from any trap or danger

Discussion: Can the animals detect dangers and death?

# WHAT HAPPENED IN 2004?

- In December 2004, the residents of the islands in the east noticed that some of the animals moved to highlands.
- Later when Tsunami struck those islands many people died, but these animals survived because of their instinct.





# ANIMALS AND HUMAN LANGUAGES

- Animals have their own language and send messages to their kind
- They can also understand human languages
- Have you not seen dog, dolphin, parrot, lion, bear, tiger, cat following the instructions given by ring master in circus and zoo?





# OTHER HABITS IN ANIMALS

- Like human beings animals also sleep and wake up periodically.
- Some animals sleep for a long time to avoid unfavourable seasons.
- This is called HIBERNATION.
- Identify the hibernating animals



# SLOTH – THE LAZY BEAST

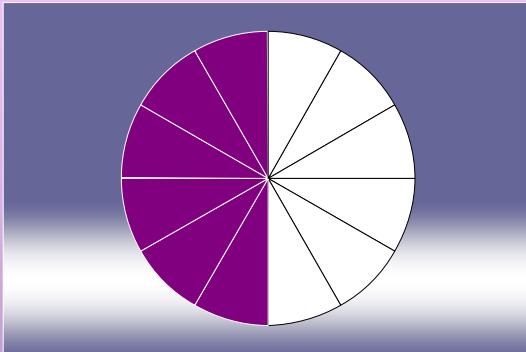


- Sloth is arboreal which means it lives and spends most of its life time on trees.
- It is found in the forests of South America.
- It lives for 40 years and during this time it would hardly move to 8 trees.
- It sleeps for 18 hours on the tree upside down.

# CLOCK TO SHOW THE TIME OF SLEEP AND AWAKE OF ANIMALS



CAT

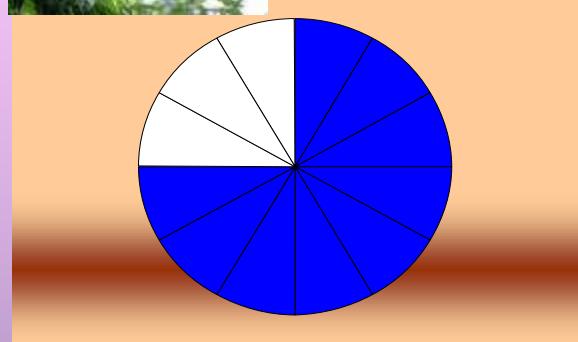


White segments show the waking time and coloured segments show the sleeping time.

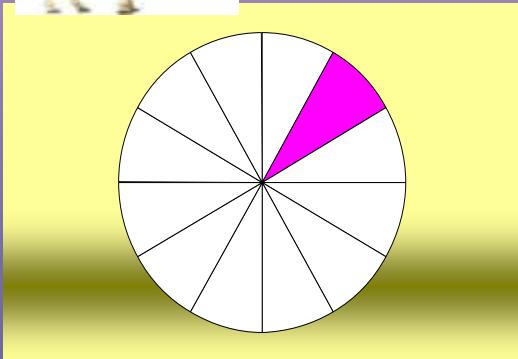
ONE SEGMENT=2 HOURS



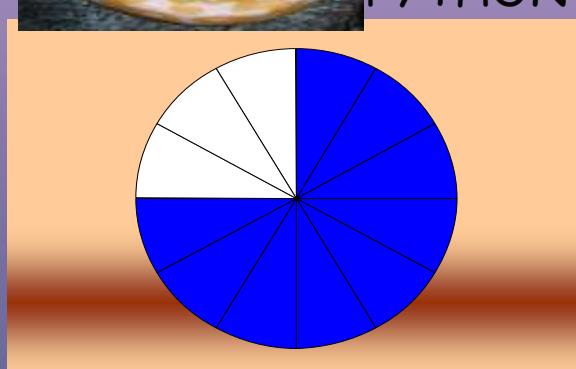
SLOTH



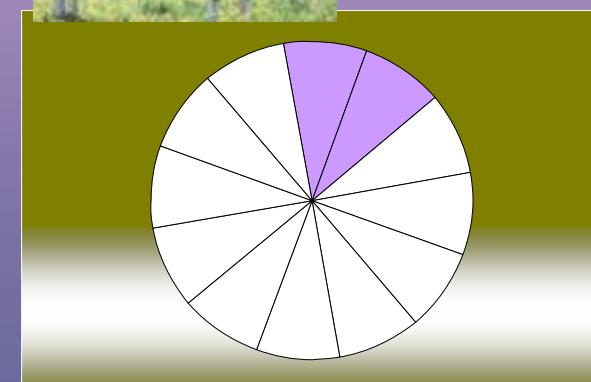
GIRAFFE



PYTHON



COW



# CALCULATE THE HOURS OF SLEEP FROM THE CLOCK

## ANIMALS

in 24 HOURS( a day)



GIRAFFE

2 hours



CAT

12 hours



COW

4 hours



PYTHON

18 hours



SLOTH

18 hours

# TIGER- EPITOME OF SENSES

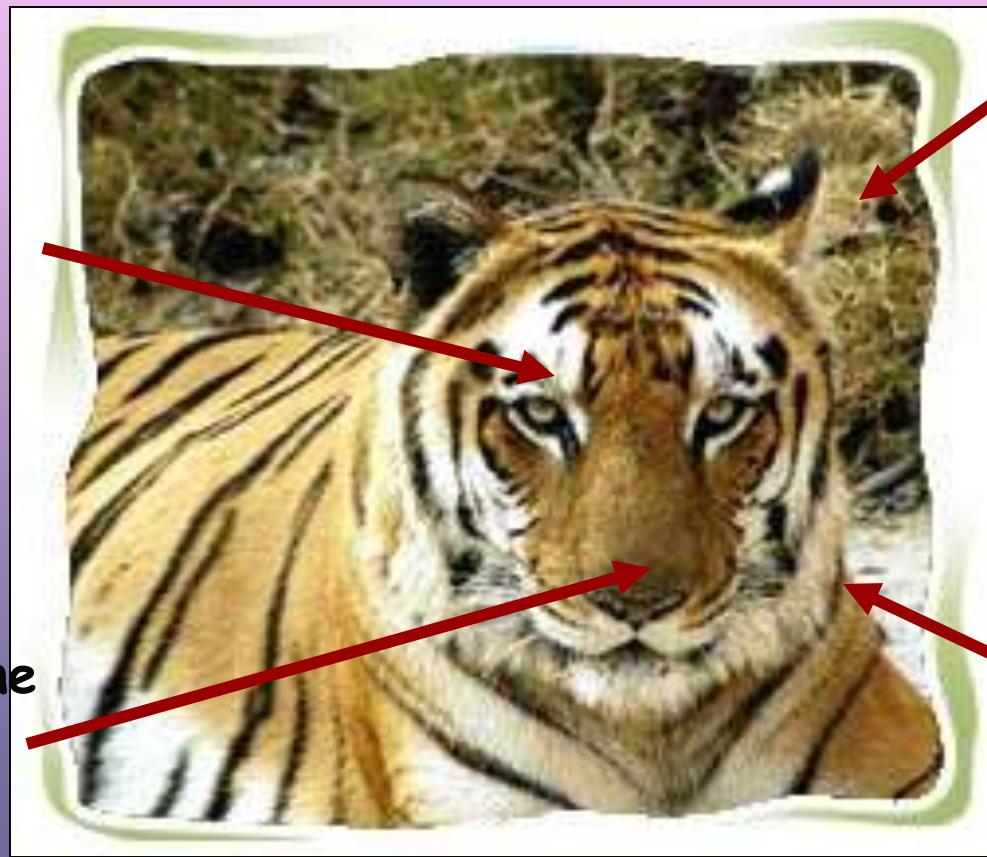


Tigers roar, snarl and make different sounds to call out to a tigress. It is a master of all senses among the animals

It can move the ear in different directions so as to catch even minute sounds

Tiger's eyes can see six times better at night than the humans

Tiger can smell other tiger's urine and it never enters other tiger's area



Its whiskers can sense the sounds and vibrations in air



# TIGERS ARE IN DANGER

Do you all know the number of tigers in our country and in the whole world is becoming less? Do you know the reason for it?

Discussion: Why does this happen?

It is because people kill them for its skin.

Yes, they are hunted not only for skin, but also for nails, teeth and flesh. Chinese prepare medicine from its flesh.

It is necessary to protect the wild life because they maintain a balance in our environment.



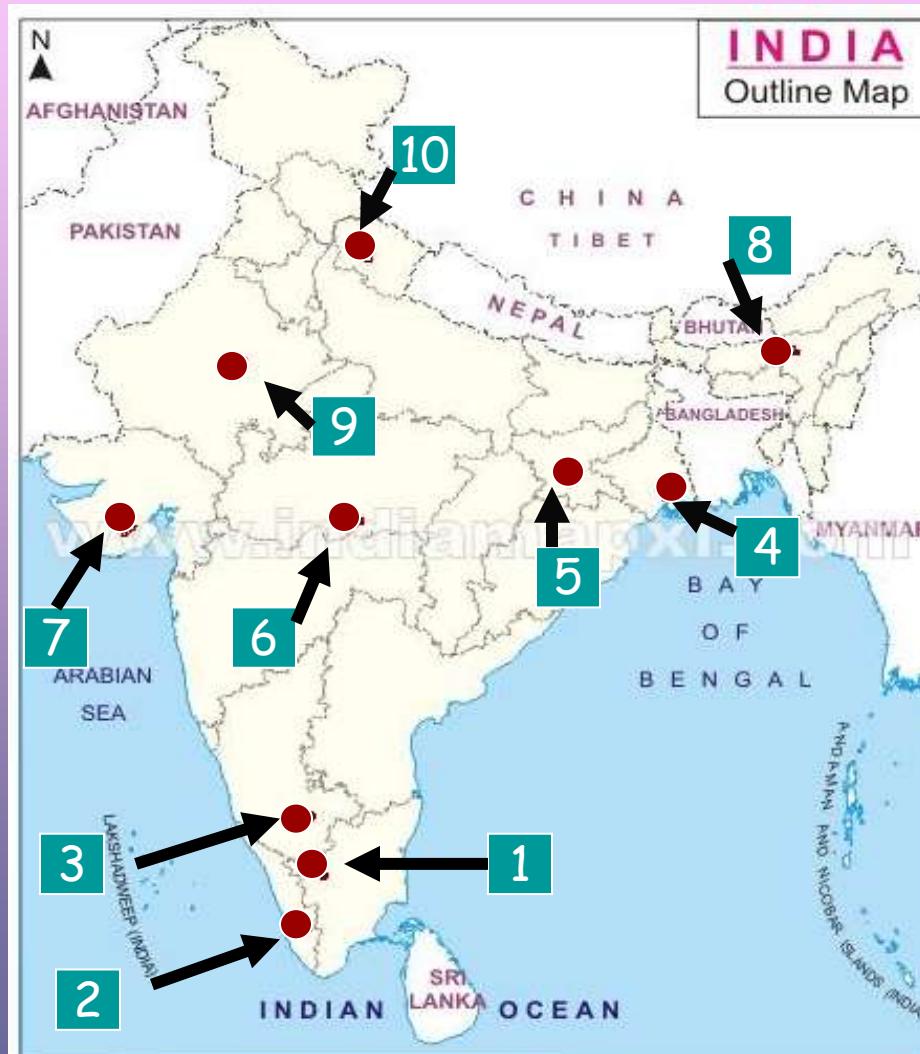
# MAINTENANCE OF ECO-SYSTEM



- Animals, man, birds, insects, plants and all non living things like soil, rock, water are all part of our ecological system.
- Absence of any member in this system will affect us.
- So, it is our duty to protect them.
- Our Government has taken many steps to ban poaching.

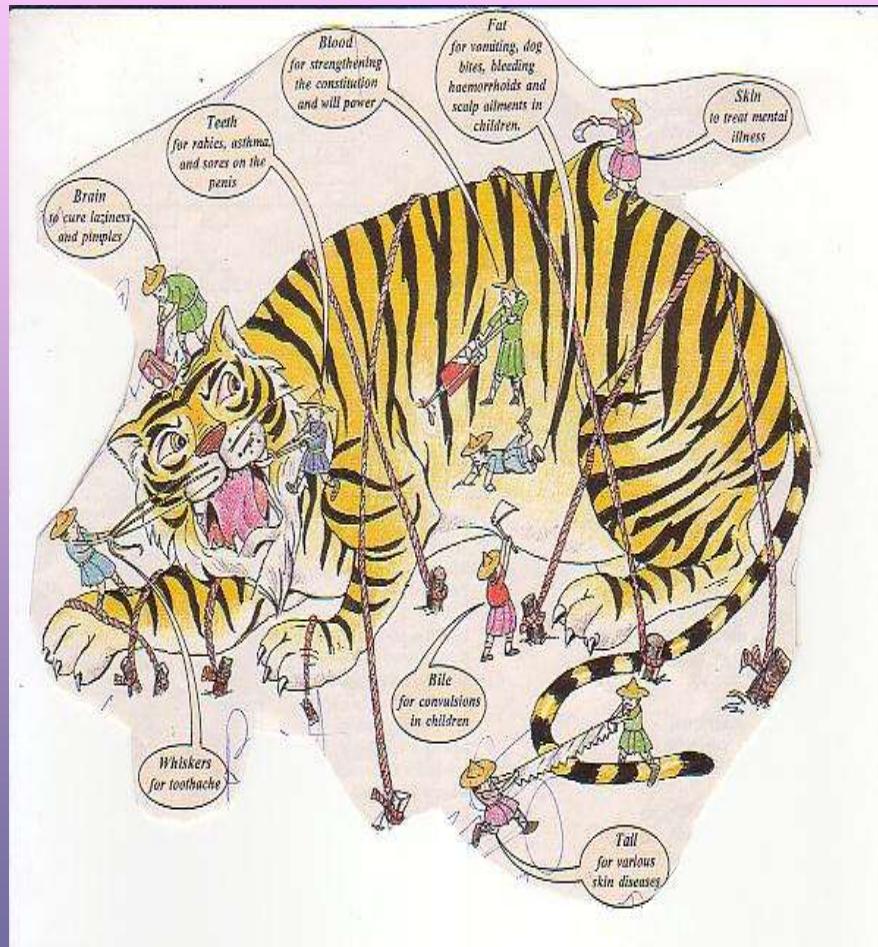


# WILD LIFE SANCTUARIES IN INDIA



No	State	Sanctuary
1	Tamil Nadu	Mudumalai
2	Kerala	Periyar
3	Karnataka	Bandipur
4	West Bengal	Sundarban
5	Jharkhand	Hazaribagh
6	Madhya Pradesh	Kanha
7	Gujart	Gir
8	Assam	Khaziranga
9	Rajasthan	Ghana
10	Uttranchal	Corbett

# ARTICLES FROM MAGAZINE



## TIGERS FOREVER

by Ruskin Bond

*May there always be tigers,  
In the jungles and tall grass  
May the tiger's roar be heard,  
May his thunder  
Be known in the land.  
At the forest pool, by moonlight  
May he drink and raise his head  
Scenting the night wind.  
May he crouch low in the grass  
When the herdsmen pass,  
And slumber in dark caverns  
When the sun is high.  
May there always be tigers,  
But not so many, that one of them  
Might be tempted to come into my room  
In search of a meal!*

From Ruskin Bond's *Tigers Forever: Poems and Stories* (1996)

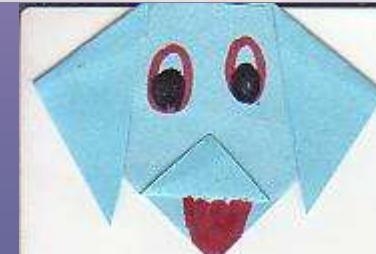
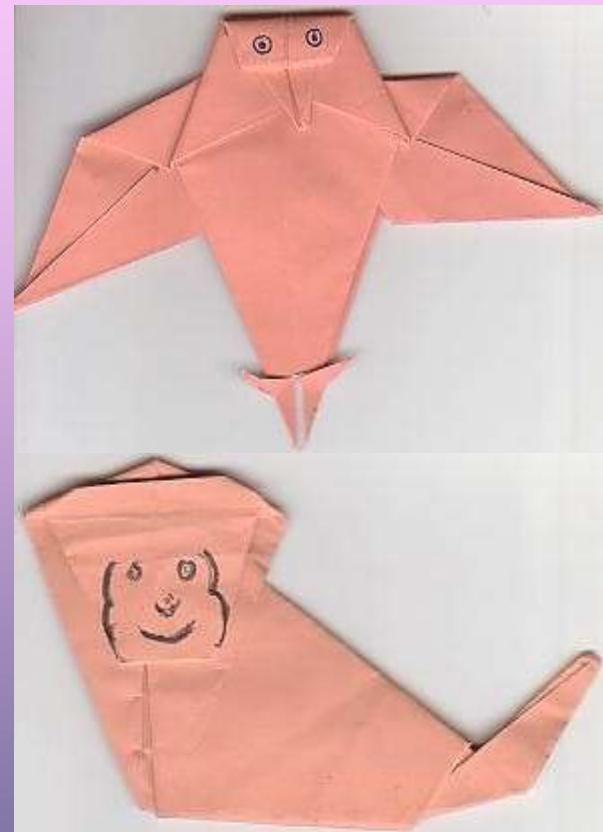
\*BROUGHT BY CHILDREN FROM WWF MAGAZINE

# STUDENTS' RESPONSE

LEARNING THE FUN WAY -  
match the animal with its qualities



ANIMALS IN ORIGAMI



# BRAIN STORM!

- Why do ants follow one another?
- How are Sniffer dogs useful to man?
- Name two birds of prey with good vision.
- Which bird has eyes located in front of its head?
- Name two animals with big ears.
- Give two super senses of tiger.
- Can snakes hear the music of been?
- What is poaching? What has our government done against it?
- Name the national parks in Karnataka.
- Which animals hibernate and why?

# BIBLIOGRAPHY/ ACKNOWLEDGEMENT

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- [www.youtube.com](http://www.youtube.com)
- Harry potter soundtrack (background music in slides 3,4,5 )
- <http://video.google.com>